EUROIZATION, MONETARY UNION AND THE CREDIBILITY OF MONETARY POLICY

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Summary Assessment of exchange-rate arrangements has become an integral feature of recent discussions on reform of the international financial architecture. The upshot of this recent interest in exchange-rate regimes is that a large part of the profession appears to have become converted to 'the hypothesis of the vanishing middle regime', for countries well-integrated into world capital markets, there is little, if any, middle ground between floating exchange rates and monetary unification. The literature on optimal currency areas emphasizes that policy independence is crucial if countries face recurrent idiosyncratic disturbances. If member-countries of the EMU show sizeable asymmetry in the timing of business cycle phases and their exposure to exogenous shocks, these countries may be better off retaining their ability to conduct monetary and exchange-rate policies. Consequently, the important empirical issue is whether Europe is a region in which country-specific shocks prevail or whether shocks affect most of these countries in a similar way. Euroization is a relatively rare phenomenon. Yet in recent years it has attracted a lot of attention, which can be proved by an increasing number of studies dealing with this problem, as well as an increasing number of countries taking this course of action. This paper deals with the advantages and disadvantages of euroization (dollarization), not only from the theoretical aspect but also on the basis of experience of other dollarized countries. The unequivocal conclusion is that euroization (dollarization) is not a monetary policy instrument that can be recommended to Croatia.*

Keywords exchange-rate regime, euroization, optimum currency areas, monetary union, BBC regime, FBAR regime, monetary policy

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Introduction

Exchange-rate regime and its implications have gathered a lot of attention in the contemporary economic literature, especially from the early 1990s up to this date. Namely, the proliferation of various exchange-rate regimes since the collapse of the Bretton Woods system and their influence on the developed and developing countries have played a crucial role in awakening the interest in this particular field of international political economy. In the case of Croatia, the monetary policy issues and the exchange-rate regime of the Croatian kuna to other foreign currencies are related to EMU, particularly in the context of Croatian accession to the EU and EMU as well. The problem of designating the appropriate exchange--rate regime is more complex than the simple argument between the supporters of the appreciation of the national currency and its opponents. This leads to neglecting the fact that the exchange rate represents an instrument of economic policy, not its ultimate goal.

Classification of exchange-rate regimes

Discussing recent trends in this branch of economic literature, it is impossible to omit the thesis of the 'vanishing middle regime'. This thesis implies the trend of moving from the intermediate group of exchange-rates to corner options typified by soft and hard pegs. It is absolutely important to accentuate that intermediate exchange-rates were beset by problems in the context of global capital deregulation and wide liberalisation of international financial flows.[1] This phenomenon was most obvious after the wave of consecutive financial crises in the 1990s. Critics of this exchange-rate regime and, at the same time, proponents of the bipolar view on exchange-rate issues used this as a proof of inadequacy of such an arrangement for the developing countries. Within the context of existing liberalisation of financial flows, this type of exchange rate has not proved persistent to financial crises and, at the same time, capable of serving as a nominal anchor against inflation. The bipolar thesis was tested on the basis of empirical data (Fischer, 2001) which were subject to a comparative method analysis for the two given years – 1991 (before the developing countries started the capital account liberalisation and before the emergence of the consecutive financial crises) and 1999 (after the consequences of the East Asian crisis began to fade). Based on the verified data, it was concluded that the total share of intermediate exchange--rate regimes decreased from 62 percent in 1991 to 34 percent in 1999. The total share of hard pegs, on the other hand, increased from 16 percent to 24 percent, and soft pegs gained even more support measured in a 19 percent increase from

[1] In the circumstances of removing various barriers to capital flow and integration into the global capital market, the span of possible choices for countries participating in this process gets more and more narrow moving to the lower part of the triangle representing the 'Impossible Trinity'. The so-called standard 'trilemma' of the open economy is based on the choice between the two goals in the context of liberalised capital flows: sovereignty of the monetary policy (flexible exchange rate) and the stability of the exchange rate (fixed exchange rate). Integration requires setting up one of these two goals. Big countries such as the People's Republic of China and India are exceptions to this rule because they can afford capital restrictions.

1991 to 1999. The 'vanishing middle regime' thesis can be easily observed in the case of the developing countries that have embarked on the global capital integration scheme.

Therefore, it is convenient to list propaedeuticly the exchange-rate regimes and identify the ones relevant to the Republic of Croatia. Frenkel (2003) defined 9 different exchange-rate regimes starting with fixed regimes and moving along the continuum to the flexible ones (Beker, 2006: 1):

Fixed exchange rates:

1) Monetary union
2) Dollarization or euroization
3) Currency board

Intermediate exchange rates:

4) Adjustable peg
5) Crawling peg
6) Basket peg
7) Target zone

Flexible exchange rates:

8) Managed floating
9) Clean floating

In short, intermediate exchange rates were quite popular after the breakdown of the Bretton Woods system because they apparently offered the advantages of both the fixed and flexible exchange--rate regimes combined in one single arrangement. Adjustable peg, as a first variety of intermediate exchange-rate regime, refers to occasional adjustments of parity after the inception of economic turmoil and its influence upon the equilibrium of the national economy. Under an adjustable peg, the bands tend to be narrow, less than or equal to ± 2.25 percent. The fact that such a regime is prone to the currency-mismatching problem tends to be its biggest weakness. The crawling peg is predominantly characterized by frequent adjustment of the exchange rate. The band tends to be wider than the bands around the adjustable pegs so the monetary authority can set a path for the exchange rate instead of a level. This band disallows unpredicted appreciation or depreciation, while the criteria for setting up an exchange rate are depoliticized.[2] National currency aligned to the basket of currencies (basket peg) can be marked as a salient solution for escaping the volatility risk of the national currency caused by volatility of other foreign currencies. Selection of currencies contained in the basket and their relative share depends on the major trading partners. The last variety of intermediate regimes refers to the target zone and it comprises the commitment of the monetary authority to contain the exchange rate in the widely defined corridor around central parity.[3]

Broaching the issue of flexible exchange-rate regimes, it is notable to highlight two varieties of such an exchange-rate regime. Clean floating is

[2] Despite the aforementioned claim, it is disputable up to which degree these criteria are depoliticized. Setting up criteria is not a job explicitly reserved for technocrats, but they are also subject to the struggle over power between conflicting political parties. The criterion most likely used for such purposes is the difference between the country's inflation rate and the inflation rate of their trading partners. Methodology for calculating the inflation rate is not impartial in some countries. Some prices, such as food and energy prices, are administered by the government or their proxies. Therefore, it is impossible to calculate real exchange rates.

[3] A good example can be found in ERM II, because new EU members must present the ability to contain the exchange rate of their currencies against the euro within a ±15 percent band.

solely characterized by the interaction between demand for and supply of particular currency in the foreign currency market. On the other hand, managed floating is described as a regime within which monetary authorities are equipped with discretionary power to intervene when intervention becomes indispensable. In the case of intervention, the monetary authority is not led by some target value for the exchange rate. This means that market forces predominantly influence the outcome.

Fixed exchange rates are far more interesting from Croatia's perspective if we bear in mind the very high degree of euroization of the national economy.[4] Currency board is the first variety of the fixed exchange-rate regime. The primary focus of the currency board is to keep foreign currency reserves sufficient (usually 110-115 percent) relative to monetary base in order to ensure unrestrained convertibility of domestic currency into foreign reserve currency at a fixed rate of exchange. Euroization/dollarization represents a further step, even more radical than the previous one. It implies abandonment of the national currency with or without the approval of the country whose currency serves as the new legal tender. Monetary union also means abandoning monetary sovereignty for the sake of the common currency, but bears some advantages over the two preceding arrangements due to participation in the process of stipulating monetary policy. Currency board will not be subject of our inquiry in this article as it is unsuitable for Croatia and its economy.[5] Dollarization/euroization refers to the replacement of the national currency with the euro or US dollar, whereby the newly introduced currency takes over money functions such as the means of payment, storage of value and accounting units.[6]

When considering the dollarization/euroization option, it is highly important to explain under which circumstances it is proposed. It is very unusual that the option is even considered, unless a previous history of policy failures exists. Dollarization/euroization does not require approval from the FED or

[4] Euroization is measured by the total share of saving deposits in euros and with the help of the total percentage of credit arrangements containing foreign currency stipulation expressed in euro.

[5] Marijana Ivanov from the Department of Finance of the Faculty of Economics & Business at the University of Zagreb points out that the monetary system in Croatia resembles the currency board in several features. She explains her thesis by arguing that in the past ten years M1 has been created almost entirely (95-97 percent) via foreign currency transactions. *Hrvatska narodna banka* (central bank) has been purchasing foreign currency from commercial banks and the Croatian state. Despite this very accurate claim, the remaining features of the currency board cannot be found in Croatia's example (*Večernji list*, May 17, 2008).

[6] IMF Occasional Paper (No. 171) from 1999 reports on 7 countries where dollar makes up more than 50 percent of money stock circulating in economy, 12 countries which can be identified as having 30-50 percent of dollar bills in the money supply, and many others with the total share of 15-20 percent. Economic literature makes a distinction between official and unofficial dollarization/euroization. In the latter case, dollar/euro does not represent legal tender, whereas in the case of official dollarization/euroization, one of the two currencies becomes legal tender. Some authors observe monetary union as a special form of dollarization from this perspective.

the ECB, and has in most cases occurred as a result of market forces. The sole decision to use dollars/euros by consumers or entrepreneurs implies a high inflation rate and depreciation of the national currency, or at least the expectation of such events to unfold. Discussing dollarization advantages such as lower interest rates as a consequence of risk premium elimination and lower inflation rate, it is mandatory to examine whether these presumptions are valid, and if they are, in which case. As Mann (1999) points out, dollarization does not automatically lead to reduced interest rates, because interest rates are predominantly determined by levels of fiscal deficit, the depth of the financial market, and the flexibility of the labour and goods market. Goldfajn and Olivares (2000) argue that lower interest rates in dollarized countries can occur as a consequence of financial market liberalization. In the short and medium run, dollarization does not bring treasury consolidation, but makes the insight into fiscal authorities' negligence even more transparent. Tornell and Velasco (1995) came to the conclusion which underlines the importance of fiscal authority's diligence and its fear of losing credibility. Risk premium depends on the performance of the financial sector along with its active and passive positions. Banks are exposed to bankruptcy even in the case of dollarized countries. Dollarization itself does not exclude the importance of managing capital adequacy. Backe and Wojcik (2002) show how dollarized countries lose the central bank's role of the lender of last resort if systematic problems in the banking sector occur. A survey conducted by Gomis-Porquiras, Serrano and Somuano (1997), using examples of 13 Latin American countries, conclude that banking crises last longer in dollarized countries. The staticity of the labour and capital market makes reallocation of resources according to market forces induced by dollarization very difficult. Dollarization also implies some political losses when it becomes clear that the prospects for boosting economic growth via independent monetary policy vanish. In the long run, decisions made by monetary authorities in the USA or the EU have severe consequences for economies of dollarized or euroized countries. Despite the fact that such decisions can sometimes favour the interests of a particular national economy, the possible outcome can cause misallocation of production factors inappropriate for development perspectives.[7] Misinterpretation of the fiscal policy's role can also precipitate the following crises if the fiscal policy is conceived as the only solution to external economic shocks while neglecting the profligate fiscal policy as the factor contributing to the introduction of dollarization in the first place. It is interesting to mention the following analogy between dollarization and diet. Dollarization can be compared to a diet which consists only of refraining from eating food (Mann, 1999). This sort of diet makes a person slim, but not healthy at all. The same can be said about dollarization in the absence of structural reforms. Benefits attached to dollarization are intended to demonstrate themselves in the short run. On the other hand, costs can be very severe for a dollarized/

[7] When analysing breakdowns of every single fixed exchange rate, particularly the gold standard, it is impossible to overestimate the importance of divergent productivity growth rates among different countries being reflected in relative prices in tradable and non-tradable goods (Mann, 1999).

Table 1. Criteria for choosing among fixed exchange-rate regimes

	Currency board	Dollarization	Monetary union	"Ideal"
Seigniorage	Yes	No	Yes	Yes
Interest premium	High	Low	None with rest of monetary union	None
Financial depth	No	Yes	Yes	Yes
Lender of last resort	No*	No*	Yes	Yes
Decision role	No	No	Yes	Yes

Note (*): Except to the extent that a bail-out authority commands resources, which can provide a lender of next to last resort.
Source: www.iie.com/publications/paper/williamson1000.htm

euroized country. Analysing costs and benefits of this particular exchange-rate regime, we can conclude that immediate euroization is not the appropriate variety of the fixed exchange rate for Croatia. Croatia still needs an independent monetary policy for the upcoming accession process to reap full benefits of its potential membership in the EMU.

Central bank and the credibility of monetary policy

Two circumstances significantly circumscribe the ability of politicians to pursue their private or political objectives: when their promises are not credible, and when they must implement their decisions through bureaucratic agents who do not share their preferences (Keefer and Stasavage, 2003). Monetary policy is suitable for analysing delegation issues and the credibility of monetary policy which cannot be quantified directly, but rather observed using inflation rate as a proxy. The mere existence of multiple veto players, along with checks and balances, makes an outstanding impact on the decision-making process. North and Weingast (1989) argue that the constitutional changes increasing the British Parliament's role as a constraint to the monarch following the Glorious Revolution of 1688 encouraged lenders to reduce the risk premium on loans to the British Crown. Conducting research on monetary policy, the researcher is confronted with underlying issues of political stability and political credibility which are nevertheless quite distinct. Policy stability is high when the set of policies that politicians prefer to the status quo is small; policy is unstable when this set is large. Credible commitment introduces an explicit dynamic element, however, in which policy choices today influence the payoffs to policy options tomorrow. More to the point, policies can be stable, but not credible (Keefer and Stasavage, 2003). Stability provides no guarantee that once citizens have relied on the policy in their contractual, investment or other decisions, the same politicians tomorrow may not take advantage of their reliance and can

reverse the policy. In the model presented by Barro and Gordon (1983), governments prefer lower inflation and higher national income. Before the government actually sets a monetary policy, however, private actors must form inflation expectations and write contracts governing the future sale of goods and services. After these contracts have been signed, governments will have an incentive to boost output by pursuing a high inflation policy. In the equilibrium, agents anticipate this behaviour by the government and build an "inflation bias" into their wage contracts. Rogoff (1985) offered delegation of monetary policy to an independent central bank as a solution to the time-consistency problem in monetary policy. The central bank would place a greater weight than society at large on stabilizing prices relative to stabilizing output and, so, would be less tempted than the politicians to make surprise increases in the money supply. Keefer and Stasavage (2003) tested this hypothesis using regression analysis and reached the same conclusion as Rogoff. However, both authors expanded their model by including political polarization. Delegation of monetary policy to an independent central bank raises credibility which is in turn even more reinforced by multiple veto players, such as a bicameral parliament. Credibility is maximized if interests of the independent central bank and the non-agenda setting veto player converge. Regarding Croatia, we can conclude that a very high degree of the central bank's independence exists. Independence issues are even more strengthened by the law regulating central bank. Credibility of the central bank's actions can also be measured by the absence of frequent governor turnover as a result of tenure guarantee.

Table 2. Setting monetary policy in four institutional frameworks

	One veto player	**Two veto players**
No delegation	1. Public fixes expected inflation 2. Supply shocks occur 3. Veto player sets inflation rate	1. Public fixes expected inflation 2. Supply shocks occurs 3. Agenda setter proposes inflation rate 4. Second veto player accepts or refuses proposal 5. If second veto player refuses, status quo rate of inflation prevails
Delegation	1. Public fixes expected inflation 2. Supply shock occurs 3. Central bank (CB) sets inflation rate 4. Veto player can override CB	1. Public fixes expected inflation 2. Supply shock occurs 3. CB sets inflation rate 4. Both veto players agree to override the CB. If no override, CB inflation rate prevails 5. If veto players override, agenda setter proposes rate of inflation 6. Second veto player accepts or refuses proposal 7. If second veto player refuses, status quo rate of inflation prevails

Source: Keefer and Stasavage (2003)

Monetary union – Croatia's goal on the path to real convergence

Monetary union is usually defined as a common currency zone with three key attributes: common currency, single monetary and exchange-rate policy. Appropriateness of joining the monetary union is most prominently questioned in the light of optimal currency area theory (Mundell, 1961). The basic criteria considered are as follows:

1) Level of economic integration (trade integration and integration of production factor markets);[8]
2) Similarity of economic structure;
3) Fiscal federalism.

Growing openness of national economies in the sense of increased international trade has clearly showed the benefits of exchange-rate stability, exchange-rate risk elimination and lower transaction costs. Enlargement of the area in which one particular currency prevails increases microeconomic efficiency, but diminishes the possibility for using independent monetary policy to countervail against external shocks with different impacts upon various parts of this area (McCallum, 1999: 3). Except the aforementioned benefits stemming from microeconomic efficiency, other benefits include a stable macroeconomic framework induced by the credibility of the monetary policy. This is only possible if anti-inflation policies are set as a priority for policy-makers. Integration of production factor markets is understood as labour and capital mobility. Labour and capital mobility play a crucial role in balancing effects of asymmetric macroeconomic shocks and therefore compensate for the loss of independent monetary policy. Labour and capital always flow from recessionary regions to expansionary ones. The similarity of economic structures refers to the symmetry of macroeconomic shocks and their influence on the countries forming a monetary union. Fiscal federalism also contributes to establishing equilibrium if countries forming monetary union are exposed to asymmetric economic shocks. Redistribution of fiscal revenues from territorial units with a stable economic position to the ones hit by the recession establishes equilibrium. Paired with production factors mobility, redistribution of fiscal revenues compensates for the loss of sovereignty over the monetary policy.

Business-cycle synchronization has been considered a prerequisite for the introduction of the common currency since the foundation of the optimal currency area theory. Bellulo *et al.* (2000: 18-19) examined the hypothesis

[8] Regarding trade-based integration with the Eurozone, it can be said that there is a high level of cross-border trade with countries forming the EMU. A conclusion like this justifies the introduction of the euro. According to the data of the Croatian Trade and Investment Promotion Agency, Croatia's most important import partners in 2007 were the following countries: Italy (16.1 percent), Germany (14.4 percent), Russia (10.1 percent), China (6.2 percent) and Slovenia (5.9 percent). Three out of the five biggest import partners introduced the euro and they form 36.4 percent of the total Croatian import. In the export sector, arguments for introducing the euro are even more persuasive. Four out of the five biggest buyers of Croatian goods and services joined the EMU and they together make up for 43.8 percent of Croatian export: Italy (19.2 percent), Bosnia and Herzegovina (14.4 percent), Germany (10 percent), Slovenia (8.3 percent) and Austria (6.3 percent).

whether Central Europe forms an optimal currency area. More precisely, the correspondence of Bulgarian, Croatian, Czech, Hungarian, Polish, Romanian, Slovakian, Slovenian and Austrian business cycles with the German business cycle and the EU aggregate business-cycle in the 1990s was tested. Methodology developed by Boone and Maurel (1999) has been chosen as the key research methodology. Business cycles were approximated by using unemployment as a cyclical component for the observed countries. In the case of each country observed by this study, a great deal of business-cycle variations can be explained by the shocks in the German and the EU aggregate business cycle. Evidently, there is a linear relationship between the aforementioned business cycles which implies potential benefits for the countries willing to join the EMU. By presenting the optimal currency area index for 1996 and 2000, Bellulo *et al.* measured the convergence of the candidate countries towards Germany's business cycle and came up with the following conclusion. The majority of countries had already finished convergence by 2000, the second group of countries comprised of Slovakia and Croatia was expected to converge by 2002, the third group of countries, such as Bulgaria and Romania, was not converging with Germany's business cycle and was not expected to do so soon.[9]

The importance of the absence of currency substitutions and possibilities for anti-cyclical monetary policy (boosting output and employment in the short run using monetary policy) becomes very clear if we try to comprehend the broader optimal currency area definition according to Obstfeld and Rogoff (1996: 632-634).[10] Both of them present us with the taxonomy of potential costs and benefits pertaining to monetary union:

1. *Reduction (or elimination) of transaction costs related to conversion from one currency into another;*
2. *Rationalisation of accounting costs; relative prices get more transparent for all entrepreneurs engaged in cross--border investments and trade;*
3. *Isolation from monetary shock and speculative bubbles which could end up in short-term and unnecessary fluctuations of the real exchange-rate;*
4. *Minimization of political pressure for imposing protectionist policies induced by real-exchange rate fluctuation.*

McCallum (1999) adds a fifth benefit:

5. *Easier and quicker integration into the global capital market.*

These benefits can reduce or even eliminate some of the costs pertaining to monetary union:

1. *Giving up the possibility for using independent monetary policy to countervail against economic shocks;*
2. *Abandoning increased inflation and real exchange-rate depreciation as tools for reducing the public debt burden;*
3. *Dealing with political and strategic problems arising from seigniorage distribution among member countries of the monetary union;*
4. *Possible speculative attacks in the phase of transition from national currency to common currency of the newly formed monetary union;*

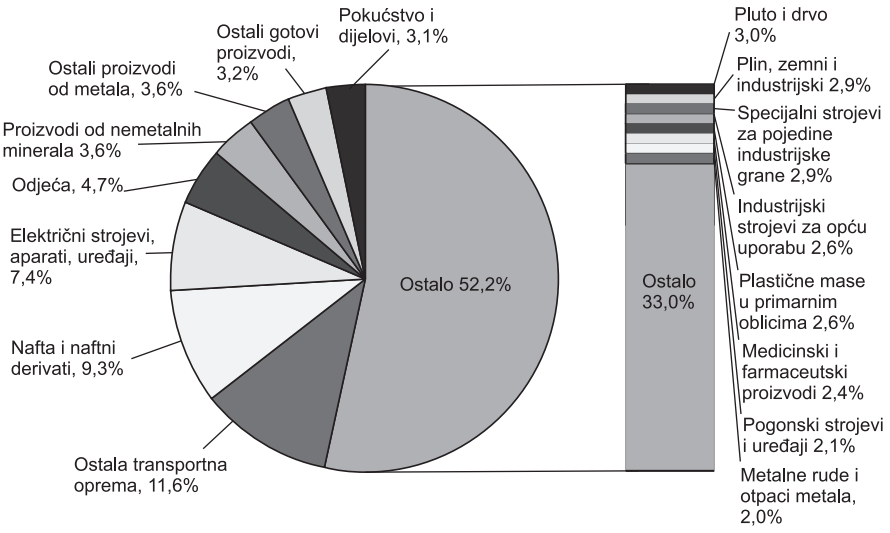
[9] www.hnb.hr/publikac/istrazivanja/i-008.htm

[10] From McCallum, B. T. (1999).

5. *Relatively high inflation in parts of the monetary union characterized by labour productivity growing faster than the average due to an increased investments flow* (Bellulo et al., 2000: 3).

After weighting potential costs and benefits pertaining to monetary union, all facts suggest that small and open economies with currency substitution and close correlation between nominal exchange rate and inflation cannot reap benefits listed under 3 and 4. This is because real exchange-rate fluctuations cannot be sustained for too long. Costs such as using increased inflation for reducing the public debt burden disappear, because all debts are indexed to the foreign currency that makes it impossible to 'tax' the creditors using exchange-rate depreciation. In the optimal currency area theory, the most important element refers to monetary and fiscal policy compatibility. The optimal currency area can sometimes comprise regions with different product orientation, so interregional demand for labour needs to be calibrated by fiscal distribution. Fiscal policy of the wider area serves as a replacement for monetary policy of the narrower area (Kenen, 1969). Monetary union as a fixed exchange-rate regime favours diversified national economies if there is readiness to use fiscal policy for fighting unemployment. Figure 1 shows that

Figure 1. Croatian export structure



To the left: furniture and details (3.1 percent), other finished products (3.2 percent), other metal-made products (3.6 percent), non-metal-made products (3.6 percent), clothes (4.7 percent), electronic devices and machines (7.4 percent), crude oil and oil-refined products (9.3 percent), other transportation equipment (11.6 percent). To the right, 52 percent of Croatian export which consists of: cork and wood (3 percent), gas, natural and industrial (2.9 percent), special machines for some industrial branches (2.6 percent), industrial machines for general utilization (2.6 percent), plastic mass in basic form (2.6 percent), medical and pharmaceutical products (2.4 percent), machinery and devices (2.1 percent), metal ore and metal leftovers (2.0 percent), remaining products (33.0 percent).

Source: www.apiu.hr

the Croatian export structure can be labelled as diversified and is therefore less exposed to external shocks.

Adding to already mentioned costs and benefits related to monetary union, one should not forget the elimination of appreciation/depreciation pressure on the national currency. Some of them are derived from the sources listed below:

A) Appreciation pressure – seasonal flow of foreign currency, foreign investment flows, exchange rate as an instrument for fighting inflation, public and private sector borrowing abroad, recapitalization of banks and companies, money market (non)liquidity, very high degree of domestic economy euroization.

B) Depreciation pressure – foreign debt repayment, paying dividends to foreign asset owners, balance-of-trade deficit, investment funds investing abroad (Gelenčer, 2008).

To conclude our analysis, it must be carefully admitted that each exchange--rate regime has some advantages and disadvantages regarding a particular country. Determination to choose one of them depends on macroeconomic performance, goals and external shocks. Rapidly changing variables in domestic and foreign environment make this choice even tougher and prone to time--inconsistency problems. Nevertheless, Croatia's accession talks with the aim of becoming a full EU member imply the introduction of the common currency as a mandatory and feasible solution for the public and private sectors. According to some estimates, the process of introduction of the common currency will take place in three phases (under the presumption that Croatia becomes a member in 2011): 1. Sovereign monetary policy from 2008-2011; 2. Entering ERM II after joining the EU; 3. Euroization in 2016 (Radošević, 2008). Timetable introduction of the common currency offers a great deal of measures in order to make Croatia's economy more attuned to European economic perspectives. The key target of every policy--maker has to be real convergence with the EU business cycle. We shall discuss these measures in more detail in the following section.

Structural imbalances: is it possible to make them disappear?

Serious problems related to Croatia's economic performance are: growing import, weakening export combined with total neglect of the development of industrial production and non-productive investments. This results in the balance--of-trade deficit which is only covered by capital inflow from abroad. The public sector's high propensity to finance consumption and inadequate structure of its investments encumber companies' efficiency and makes their products hard to compete. Lack of skills and knowledge widens the gap between import and export and creates severe economic losses. In 2007, 32 percent of companies were doing business in the red (Primorac, 2008). Some of the key national sectors are accruing heavy losses, such as shipbuilding, railways, chemical industry and public utility companies. Inflationary pressure that occurred in the first half of this year is only partially a consequence of the imported inflation. On the whole, most inflation problems were the result of structural imbalances. While listing all the weak spots, one problem sticks out as crucial – the competitiveness of the national economy. There are two possible solutions how to improve international competitiveness. First of

all, internal reforms and structural adjustments such as increasing labour productivity and wage flexibility, stifling inflation, decreasing all sorts of taxes including payroll taxes, making hiring and firing easier, represent the milestone of improving competitiveness. On the other hand, external adjustment means depreciation or devaluation of the national currency. Exchange-rate adjustment and its impact on Croatia's balance-of-trade showed almost no results. 1 percentage devaluation forms a new equilibrium which exceeds the old one by 1.34% (Stučka, 2004). At the same time, Stučka (*ibid*.: 24) identifies six indirect effects caused by devaluation which neutralizes benefits attached to it:

1. *Exchange-rate fluctuations are reflected in the inflation rate;*
2. *Dependency on import and export of raw materials and intermediate goods;*
3. *Increased price of imported and exported goods may reduce real income;*
4. *Improved performance of companies operating in the tradable sector may result in decreased employment rate in the non-tradable sector;*
5. *Euroization affects the debt burden of domestic actors which is indexed to the euro in sizeable portion;*
6. *Constant depreciation would seriously affect public finance and would lead to an increased debt burden in domestic currency.*

Croatia and its economy can therefore only rely on instruments of internal adjustments and structural reforms, not to mention the necessity to fully liberalize and open the capital account. The only way to implement this is to consolidate fiscal policy by cutting down public sector spending and closing the fiscal deficit (Mathieson, 1993: 30). Excessive fiscal deficit would result in the capital being drained abroad. Hereby, dollarization/euroization of liabilities and claims would follow as an immediate consequence. Persistent fiscal deficit fosters inflationary expectations. Fiscal deficit often means built-in inflation premium in long-term bonds. If these reforms were to be implemented, the benefits arising from introduction of the common currency would be even greater. As it has already been laid out in this article, the process of introducing the euro takes place in three phases. In order to avoid any controversies it is crucial to emphasise that every single member of the EU determines its own schedule during this process. Accomplishing complete euroization purports fulfilment of convergence criteria outlined in Maastricht in 1992.[11] The Maastricht Treaty and con-

[11] 1) Inflation rate: no more than 1.5 percentage points higher than the three lowest inflation member states of the EU. 2) Annual government deficit: the ratio of the annual government deficit to gross domestic product (GDP) must not exceed 3 percent at the end of the preceding fiscal year. If not, it is at least required to reach a level close to 3 percent. Only exceptional and temporary excesses would be granted for exceptional cases. 3) Government debt: the ratio of gross government debt to GDP must not exceed 60 percent at the end of the preceding fiscal year. Even if the target cannot be achieved due to specific conditions, the ratio must be sufficiently diminished and must be approaching the reference value at a satisfactory pace. 4) Exchange rate: applicant countries should have joined the exchange-rate mechanism (ERM II) for two consecutive years and should not have devaluated its currency during the period. 5) Long-term interest rates: the nominal long-term interest rate must not be more than two percentage points higher than in the three lowest inflation member states. The

vergence criteria are based on the principle of gradualism. Basically, convergence criteria require a restrictive fiscal and monetary policy consistent with the euro exchange-rate stability. Many economists claim that the abandonment of sovereign monetary policy paired with restrictive fiscal policy makes it impossible to avoid deflationary pressures. Setting up a problem like this ignores the difference between real and nominal convergence. Nominal convergence criteria such as fiscal deficit percentage may be termed as important, but not as crucial.

Important factors which enable the monetary union to perform well must be seen in labour market flexibility, healthcare and social care reform, as well as pension system reform. Public sector expenditures would be reduced in the course of structural adjustments. Fiscal policy focused on production factors mobility in the single market deserves special attention.[12] It is easy to draw the conclusion that fiscal policy represents a cornerstone for achieving real convergence in the middle run without facing deflation. On the other hand, the inflow of short-term capital poses the biggest challenge for Croatian monetary policy. Key features of capital influx are related to its quantity, maturity and the attempt to use the difference between active and passive interest rates. Foreign capital influx and the Balassa-Samuelson effect are the most important factors affecting appreciation of the national currency.[13] Theoretically, HNB (central bank)

purpose of setting the criteria is to maintain the price stability within the Eurozone even with the inclusion of new member states.

[12] Continuation of reform efforts and their importance can be found in *EMU and Cohesion: Introduction* (Barry and Begg, 2003). A case-study on Greece and the EMU that was done by Kevin Featherstone (2000) is mentioned in this paper. Initial effects of joining the EMU were favourable for Greece and its economy, but at the same time some constraints occurred. Obligation to fulfil convergence criteria induced politicians to promote necessary reforms so they could realize their goal of maximizing electorate support as politicians at the same time. After initial reforms had been done and Greece joined the EMU, there was no impetus for further reforms. When lacking external pressure, reforms cannot be continued because they can erode support for reform-oriented politicians. As the example of the Simitis government in Greece suggests, there is always strong disaccord for reforms, such as the energy market reform, if they collide with the interest of the most powerful lobbying groups (Barry and Begg, 2003).

[13] The Balassa-Samuelson effect has a significant impact on the inflation rate especially if nominal exchange rates are stable under ERM II. If productivity is growing faster in the sector with tradable goods than in the sector with non-tradable goods, prices rise faster in the non-tradable sector. The Baumol-Boven effect is similar to the Balassa-Samuelson effect, although it has some different implications. According to the theorem, prices tend to increase faster in the sector with services such as education, healthcare and banking, despite lesser productivity, than in the capital-intensive sectors. Countries joining the monetary union are especially affected by the Balasassa-Samuelson effect. If the difference in productivity growth in the tradable and non-tradable sectors remains bigger in countries joining the monetary union than in countries that already are members, higher inflation and appreciation of the real exchange-rate occur as a consequence, under the presumption of a fixed exchange-rate. If there is a flexible exchange rate, monetary authority will allow rapid exchange-rate appreciation. This, in turn, ends up in increased capital inflows which makes it hard to maintain international competitiveness.

should cut interest rates to make foreign capital influx less attractive. However, regarding the performance of Croatian economy (excessive public and private consumption, inflation, balance-of--trade deficit), it is impossible to rely on cutting HNB's interest rates. On the contrary, interest rates should be kept high enough to curtail excessive consumption and inefficient investments. In the context of capital account liberalization, this would be hard to accomplish. Accession to the EMU imposes lower reserve requirements. Reduced reserve requirements would open floodgates for the money that is kept on the central bank's account and would create additional liquidity (Novotny, 2008). After joining the EMU, the budget can be expected to play the most important role.[14] If the domestic market does not function well, an excessive spending campaign can cause a boomerang effect. Investments matter, but their structure and efficiency matter as well.[15] The investment cycle in sectors with added value below average impedes economic development and can erode national wealth in the long run. The formula I+U>A+E, where I stands for investment, U for import, A for savings and E for export, manifests itself in the balance-of-trade deficit. This deficit is always covered by capital influx which in turn increases the debt burden. Standard economic theory recommends restrictive fiscal policy, but increasing taxes is less efficient and more dangerous than curtailing spending. This is especially accurate if financial means are spent on non-tradable goods. Economic policy which implements recommendations like this would decrease aggregate demand. It would therefore face severe resistance and political pressures. The present condition of the Croatian economy is plagued by structural imbalances which are precipitated by a decade-long fiscal expansion.[16]

[14] Using monetary policy to curtail capital influx in developing countries can be quite frustrating. Banks often possess portfolios with short-term loans in order to achieve higher turnovers of already borrowed financial means. This denotes that bankers are frequently responsible for capital misallocation. In the present situation, the HNB can rely on large foreign reserves, but this can rapidly change because short-term loans make up 40 percent of the foreign debt. A situation like this requires prudential measures and controls in order to maintain financial stability. Monetary policy measures are to become less significant on Croatia's way to achieving real convergence towards the EMU (Zbašnik, 2007).

[15] Just like investments can boost economic growth, they can impede it. Excessive investments in infrastructure above 5 percent of GDP can have a negative impact on long--term growth.

[16] Balance Sheet Approach (BSA) can be explained as an analysis of each major economic sector, of its assets and liabilities. The sole purpose of this method is to assess the vulnerability of different sectors to external shocks. The given method analyses a national economy as a system of intertwined sectoral balance sheets. Orthodox macroeconomics relied on aggregate variable analysis and their 'flow' such as fiscal deficit or balance of payments, while the BSA is intended to measure a situation in a given moment (financial sector's assets and liabilities). Detailed balance sheets of major economic sectors are constructed to get an overview of maturity, currency and capital inconsistency and intersectoral connectedness. Croatia was incorporated in the BSA analysis in 2000 and 2005. Cumulative data show significant worsening in Croatia's external net position from 2000 to 2005. Negative external net position of all major Croatian economic sectors rose from 22 to 40 percent of GDP. The most cri-

The membership in the EMU offers advantages to Croatian economy as a whole, while it enables it to avoid bad scenarios from the perspective of the risk-affected private non-financial sector. The given sector derives the majority of its revenues in domestic currency, which can be dangerous in the case of liabilities denominated in euros. The currency mismatching problem can generate a whole wave of insolvent companies and make liquidity an even greater problem. So far, Croatia has been capable of fulfilling convergence criteria, but it has to focus on real convergence to reap the benefits pertained to monetary union. The illusion that problems can be solved only by using EU funds needs to disappear. Regional, structural and cohesion policies at the EU level cannot serve as equivalent to a national strategy of economic development.[17]

Conclusion

The openness criteria refer to the observation that small and open economies fulfill all prerequisites for establishing the fixed exchange rate (wage and price rigidity is predominantly the case of large economic units). Economies entering monetary unions with a diversified economic structure are isolated against external shocks. Fiscal federalism, level of economic integration and similar economic structure make the case for Croatia entering the EMU even stronger. Only an optimal policy mix made out of restrictive monetary and fiscal policy together with development strategy can guarantee economic growth in the long run. This is important in the period prior to accession, as well as after it has been completed. Monetary union is no panacea, but it offers a great deal of benefits in the given circumstances, especially compared to other exchange--rate regimes.

tical situation can be seen in the position of the public and private non-financial sectors, while positive external net positions were revealed in the case of HNB (central bank) and the private financial sector. Potential vulnerability of the Croatian financial sector arises from its negative position in relation to non--residents. At the same time, it is exposed in the sense of loans to the domestic non-financial sector. BSA showed a high degree of vulnerability of the Croatian economy to any changes in exchange rates in the midst of euroization (Radošević, 2008).

[17] Parallel to fostering cohesion at the EU level, there are gaping regional disparities at the national level and *vice versa* (some Italian and German regions converge at the national level while lagging behind the EU average). Empirical data on structural funds and their effectiveness are fragmented. Authors such as Cappelen *et al.* (2003) point out that the cumulative effect of these policies is positive, whereas Boldrin and Canova (2001) fiercely contest views like these. Hallet (2002) insists on a more detailed analysis. Members that have recently joined the EU cannot expect large net transfers because all transfers combined together are capped to max. four percent of GDP.

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Euroizacija, monetarna unija i vjerodostojnost monetarne politike

SAŽETAK Procjena tečajnih režima postala je integralna značajka novijih rasprava o reformi međunarodne financijske arhitekture. Konačni je rezultat tog novijeg interesa za tečajne režime to što se znatan dio struke, čini se, preobratio na "hipotezu o iščezavajućem srednjem režimu", jer je zemljama koje su dobro integrirane u svjetska tržišta kapitala ostalo malo prostora za kompromis između fluktuirajućih tečajeva i monetarne unifikacije, ako ga je uopće ostalo. Literatura o optimalnim valutnim područjima naglašava da je politička neovisnost presudna kad se zemlje suočavaju s karakterističnim poremećajima koji se ponavljaju. Premda države članice Europske monetarne unije pokazuju znatnu asimetriju u tempiranju faza poslovnih ciklusa i izloženost egzogenim šokovima, tim bi zemljama bilo bolje kad bi zadržale sposobnost provođenja monetarne i tečajne politike. Kao posljedica toga važno empirijsko pitanje jest je li Europa regija u kojoj prevladavaju šokovi specifični za pojedine zemlje ili ti šokovi na sličan način pogađaju sve te zemlje. Euroizacija je razmjerno rijetka pojava. Ipak, posljednjih godina privlači mnogo pozornosti, što se može dokazati sve većim brojem studija koje obrađuju taj problem te sve većim brojem zemalja koje se kreću u tom smjeru. U ovom se radu razmatraju prednosti i nedostaci euroizacije (dolarizacije), ne samo s teorijskog stajališta nego i na osnovi iskustva drugih dolariziranih zemalja. Nedvojben je zaključak da euroizacija (dolarizacija) nije instrument monetarne politike koji bi se mogao preporučiti Hrvatskoj.

KLJUČNE RIJEČI tečajni režim, euroizacija, optimalna valutna područja, monetarna unija, režim BBC, režim FBAR, monetarna politika